

# **FIRE PROBLEM STILL EXISTS. LETTER**

by

**Richard W. Bukowski  
Building and Fire Research Laboratory  
National Institute of Standards and Technology  
Gaithersburg, MD 20899, USA**

**Reprinted from the Plumbing Engineer, Vol. 29, No. 2, 48,50, February 2001.**

**NOTE: This paper is a contribution of the National Institute of Standards and Technology and is not subject to copyright.**



**NIST**

**National Institute of Standards and Technology**  
Technology Administration, U.S. Department of Commerce

## The Fire Problem Still Exists

### To the Editor:

I would like to offer some comments regarding the fire protection column in the September 2000 *Plumbing Engineer* (p. 10). I agree with Mr. Schulte's point that we do not make enough use of fire statistics to assure that code proposals address real problems. I also agree that we have done an outstanding job in reducing fire losses in this country in the past 25 years. The cited statistics clearly indicate that death from fire in the U.S. is arguably no longer a problem of societal importance except in one- and two-family residential occupancies, and there it is half of what it was. The number of fire deaths per annum in non-residential structure fires (120) is slightly lower than the number of deaths per annum from insect and snakebites (140). High rise buildings generally, and high rise hotels specifically, are among the safest structures from fire.

However, in my view ~~these~~ statistics do not support the code changes proposed. First, these laudable statistics have been achieved in buildings that meet current codes and thus include sprinklers, alarm systems, corridor separations, and the complete list of fire safety features. To justify the removal of fire alarm or corridor separations ~~as~~ proposed one would have to show that these features played no role in the level of safety observed — that it all was the result of sprinklers alone. This cannot be shown or even implied from the data.

Second, while we have made significant progress on fire deaths we have not solved the fire problem. The number of reported fires has declined significantly, possibly because of earlier notification leading to manual suppression, or automatic systems. But injuries have not declined ~~as~~ much and most notably, property damage has ~~been~~ increasing significantly even accounting for inflation. According to the latest NFPA fig

ures, in the 22 years from 1977 to 1999, property loss per structure fire increased 332 percent, which reduced to a 57 percent increase when adjusted for inflation. Additionally, these are direct losses — adding indirect economic effects on society tends to make the picture even worse.

So my answers to Mr. Schulte's questions ~~are~~ that we *do* still have a fire problem in the U.S., although the fire death problem has been relegated to a part of one occupancy that society traditionally does not like to regulate. We should not begin to disassemble the fire safety system that has produced this success until and unless we are sure of the consequences. We would not like to determine the contribution of alarms and compartmentation by the increased body count in fire in buildings where they are no longer provided.

*Richard W. Bukowski, RE., FSPFE  
NIST Building and ~~Fire~~ Research Lab  
Gaithersburg, Md.*